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Notice of Allowability	Application No.	Applicant(s)	
	10/708,212	YU ET AL.	
	Examiner	Art Unit	
	Tuyet Vo	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/08/2006.
2. ☒ The allowed claim(s) is/are 1-3 and 8.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

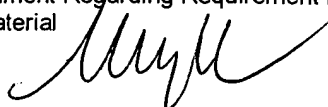
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>9/08/2006</u> 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
|---|---|



TUYET VO
PRIMARY EXAMINER

Response to Arguments

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-3 and 8 are drawn to an apparatus comprising a control driver utilizing a change of duty cycle for controlling a low noise of LEDs, classified in class/subclass 315/247.
- II. Claims 4, 5 and 8 are drawn to a control driver utilizing a change of frequency for controlling a low noise of LEDs, classified in class/subclass 315/209R.
- III. Claims 7 and 8 is drawn to an apparatus a control driver utilizing a change of phase shift for controlling a low noise of LEDs, classified in class/subclass 315/194.

These inventions above are distinct from the other because of the following reasons:

Inventions I, II, III are related as subcombinations disclosed as usable together in a single combination. The subcombination I is not required in subcombinations II or III such as a control pulse generating unit in the invention I does not require a control signal having a frequency or phase shift varied with time as claimed in the invention II and III respectively. There is no generic claim. Claim 8 is a linking claim and being examined with each subcombination group.

The light source LEDs are driven by a control pulse signal, wherein a duty cycle of the control pulse signal varies with time is considered in a manner of non-obvious variation compared to a frequency or phase of the control pulse signal that varies with

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time. Accordingly, the search required for each Group are different, therefore, restriction for examination purposes as indicated is proper and made FINAL.

Since the restriction is confirmed as noted above and is made final, the application under a condition of allowance, non-elected/withdrawn claims, accordingly, have been canceled.

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as following:

In the claim, cancel claims 4, 5 and 7.

The above noted amendment has been added in order to expedite a process of the application in allowable condition.

Reasons For Allowance

1. Claims 1-3 and 8 are allowed.
2. The following is an examiner's statement of reasons for allowance: the prior art of record fails to disclose a low visual noise pulse width modulation illumination control

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circuit for controlling the illumination of light-emitting diodes inside a liquid crystal display, comprising an illumination control illumination-adjusting signal and pulse-generating unit for receiving an illumination adjusting signal and generating an illumination control pulse signal according to the illumination-adjusting signal, wherein a duty cycle of the illumination control pulse signal varies with time within a predetermined range and a DC/DC converter, coupled to the illumination control pulse-generating unit, for driving the light-emitting diodes according to the illumination control pulse signal as required in claim 1 and 8.

3. The remaining dependent claims are allowable for at least above reason.
4. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. None of cited/record prior arts stands alone or combination with others discloses all limitation required in claim invention.

Correspondence

Any comments considered necessarily by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

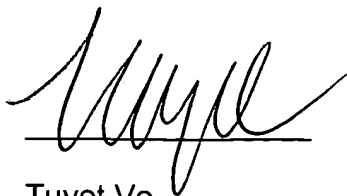
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyet Vo whose telephone number is (571) 272 1830. The examiner can normally be reached on Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan can be reached on (571) 272 1740. The fax phone number for the organization where this application or proceeding assigned is (571) 273-8300 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571 272 2800.

Information regarding the status of an application or status information for publishing/unpublishing applications may be obtained from the Patent Application Information Retrieval (PAIR) system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the PAIR system, contact the Electronic Business Center (EBC) at toll free 866-217-9197.

A handwritten signature in black ink, appearing to read 'Tuyet Vo', is written over a horizontal line.

Tuyet Vo

Primary Examiner

October 01, 2006